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CHAPTER 10

THE LABOR FORCE IN SEVERE DEPRESSIONS

> "The number of would-be wage earners and the number of persons employed are in the main independent of one another."
>
> A. C. PIGOU, *The Theory of Unemployment*

The Additional Worker Theory

THE depression of the 1930's gave rise to the apparently new theory that unemployment of the main breadwinner would make it necessary for other members of the family normally engaged in housework, attending school, or retired, to follow the "help wanted" notices, and would thereby result in additions to both the labor force and unemployment.[1] The "additional worker theory" turned out to have an opposite version: persons unable to get jobs, or not wanting them in normal times, are attracted into the labor force during times of exceptional prosperity by the higher wages and genial personnel interviews.[2] In the first version, an increase in supply comes from a *fall* in demand; in the second, it comes from a *rise* in demand. The two versions seem to contradict each other, but some economists subscribe to both. Woytinsky, for example, has suggested that both depression and boom may bring about greater participation than "balanced prosperity."[3] Obviously, different people may react variously to depressions but what is the net behavior? Can either of these theories find support in actual experience?

[1] Several articles cover an early controversy on this subject between W. S. Woytinsky and D. D. Humphrey; and some later studies by the author oppose the theory. The Woytinsky view seems to have become the general opinion, but the author believes that the statistics of the past and the events of the future will demonstrate it to be wrong. See Humphrey, "Alleged 'Additional Workers' in the Measurement of Unemployment," *Journal of Political Economy*, June 1940, pp. 412–419; Woytinsky, *Additional Workers and the Volume of Unemployment in the Depression*, Social Science Research Council, Pamphlet Series 1, 1940, pp. 1, 17, 26, and "Additional Workers on the Labor Market in Depressions: A Reply to Mr. Humphrey," *Journal of Political Economy*, October 1940, pp. 735–740; Clarence D. Long, "The Concept of Unemployment," *Quarterly Journal of Economics*, November 1942, pp. 9–10, and *The Labor Force in Wartime America*, National Bureau of Economic Research, Occasional Paper 14, 1944, pp. 24–26.

[2] J. H. G. Pierson, *Full Employment*, Yale University Press, 1941, pp. 18–19, note 22: "For it is probable that if society were committed to providing job opportunity for all those able and wanting to work, however numerous, certain fresh supplies of labor not apparent at present would shortly be uncovered. . . ."

[3] W. S. Woytinsky and Associates, *Employment and Wages in the United States*, Twentieth Century Fund, 1953, pp. 322–323, and a verbal discussion at the December 1952 joint meetings of the American Economic Association and the Industrial Relations Research Association.

Surveys of the Labor Force during Depression

If a depression is "severe" when at least 10 per cent of the labor force is unemployed, six enumerations in the United States, and several in foreign countries, have measured the effect of severe depressions on labor force participation. The enumerations in the United States have included the *Enumerative Check Census* in late 1937, the decennial census in 1940, and state censuses by Massachusetts and Pennsylvania in 1934, Michigan in 1935, and Rhode Island in 1936. Those in foreign lands were made by Canada and Great Britain in 1931 (also in 1921), and by Germany in 1933. In all cases information on unemployment was obtained either from the censuses or from sources such as unemployment insurance.

The United States check census was taken as of late November 1937, almost at the bottom of the sharp recession that had started in the summer of that year. Designed partly as an audit of a voluntary postcard registration of employment taken earlier and partly as a sample enumeration that covered over a half million households on 50 of the more than 90,000 postal routes,[4] it resembled the 1940 census in concept, except that the enumerative check omitted unpaid family workers and jobholders temporarily absent the entire week of the survey because of sickness, strikes, or vacations.

The results seemingly upheld the theory that a depression causes the labor force to expand temporarily. The recession of late 1937 was very severe, for approximately 1 in 5 persons was out of work; and, in accordance with the theory, labor force participation appeared to be appreciably above that of 1930. In proportion to population aged 15–74, standardized for age-sex and rural-urban composition, the labor force rose to 58.0 per cent, a level that exceeded the 56.7 per cent in 1930, and the 55.3 per cent in 1940. The extra participants were mainly females. For every age group except 65–74 and for all females 15–74, female participation rose from 25.3 per cent in April 1930 to 29.8 per cent in November 1937, falling thereafter to 27.2 per cent in 1940. The conclusion was that the number of females employed or seeking jobs was nearly 3 million above "normal" (assuming 1930 to be normal). If, however, normal is computed by interpolating the participation between 1930 and 1940, and if labor force participation is standardized for age-sex and rural-urban composition, the excess in 1937 was about 1½ million females and ⅔ million males—somewhat more than 2 million altogether.

[4] It did not attempt to touch those places not having postal service. These included some but not all towns and villages of less than 2,500 population in 1930, undeveloped city suburbs, and remote rural areas—about 18 per cent of the nation's population.

It cannot be argued that the difference was due to the fact that the check census used an unusually comprehensive concept of labor force; in fact, the concept was rather restrictive. Nor can the difference be attributed to timing (November instead of April), for, judged by the seasonal pattern during 1946 to 1948, the labor force participation is usually about the same in these two months. The 1937 enumeration check has been criticized because it omitted certain rural places which did not enjoy postal service. But the urban estimates seem to reveal no fewer additional workers than the national ones. Conceivably the difference could be due to the fact that special enumerations of unemployment (quite aside from their reliance on a sample) may exaggerate unemployment, either by giving it disproportionate attention or by engendering an attitude in both interviewer and respondent that the survey is more successful if it reports a large number of unemployed.

But on the whole, it does not seem possible to explain the higher than normal participation by analysis and it is fortunate that we can look elsewhere for statistical light on this question.

THE FOUR STATE CENSUSES OF 1934–1936.

The Massachusetts census of January 1934, like the federal census of 1940, covered all persons 14 and older who were employed, and those who were able to work and seeking jobs, including first-job seekers and sick persons if the latter expected to resume the search for work after recovery. Excluded were housewives and students as such, inmates of institutions, invalids, and aged and retired persons not seeking jobs.

The Pennsylvania census [5] of February–April 1934, which covered 2 million households by interview, resembled the United States 1940 census except that it undertook to omit any persons who sought a job solely because the primary wage earner was involuntarily idle (though this is a highly subjective matter). The defect to be noted in this state's census was that the population was not counted and had to be interpolated. Consequently, there was no really firm foundation for computing labor force participation.

The Michigan Census of January 1935 used a concept similar to that of the 1940 United States census, and the Rhode Island enumeration of 1936 used the gainful worker concept of the 1930 United States census. The latter tabulated the inexperienced unemployed separately and included them as gainful workers. In other respects the Rhode Island census resembled those of the three other states.

[5] In addition to excluding farmers, this census omitted isolated residences. Unlike the 1930 and 1940 United States censuses, it excluded unpaid family workers, an omission of no moment, however, because it did not cover farms, where most of these workers are found.

None of the state enumerations was completely reliable. (The interviewers were largely inexperienced persons who were on relief.) They differed slightly in definition from each other and from the United States censuses in 1930, 1940, and 1950, with which they must be compared. And they were made for the most part in winter, when the labor force tends to be seasonally depressed,[6] while the federal censuses were taken in mid-spring, when labor force participation is usually higher.[7] The maximum seasonal difference between January and April, as reflected by the average pattern for 1946–1948 was about 8 workers per 1,000 population 14 and older—equal to the differences in participation between the regular national censuses in these four states in 1930 and 1940, and the 1934–1936 state surveys. However, the seasonal variation may have been smaller than in the nation as a whole, since agriculture doubtless had less influence in these industrial states.

In any case the four state comparisons do not corroborate the check census of 1937 (Table 35). The 1934–1936 labor force participation of both sexes combined was below the average of 1930 and 1940 by 3 to 10 persons per 1,000 population 14 and older, or by 5 to 28 persons per 100 unemployed adult males. If large-scale idleness had any effect, that effect was apparently to move more persons out of the labor force than into it.

But what has been the effect of depression on male and female participation considered separately? The measurement is complicated by the tendency of males to reduce their labor force participation from one high-employment period to the next and of females to increase theirs, so that the depression participation must be compared with the average at the preceding and subsequent censuses, when employment was higher. In three of the four states there was a smaller female participation during the depression than during 1930, 1940,[8] or 1950, the exception being Pennsylvania (which, paradoxically, tried to exclude additional workers from the concept). Yet the male participation in

[6] The year 1940 is also far from satisfactory as a recovery date; unemployment, though much lower than in 1934–1936, was still at record levels for any regular United States census.

[7] The practice of enumerating the United States population and labor force in April began in 1910. From 1840 to 1900 the census was taken as of June; in 1920, as of January; and in 1930, 1940, and 1950, as of April.

[8] By arbitrarily assuming that full-time housewives and students would not be seeking work, the Massachusetts survey may have excluded them from the possibility of being classed in the labor force. The explanation is rather obscure on this point. Before the new procedure was adopted by the census in July 1945, all labor force surveys may have omitted many housewives and students who were working part time or seeking gainful employment, because the enumerator may have assumed that his subject was a student or a housewife, and he may therefore have failed to press questions which might have revealed cases of job-hunting or part-time work.

TABLE 35

Number of Persons by Which the Labor Force of the Depression Years 1934–1936 Differed from That of the April 1930 and 1940 Average in Relation to Population and Unemployment, by Sex and Age Group, Four States

	Per 1,000 Population of Same Sex and Age				*Per 100 Unemployed Men 25–64*			
	Mass.,[a] *1934*	*Pa., 1934*	*Mich., 1935*	*R.I., 1936*	*Mass.,*[a] *1934*	*Pa., 1934*	*Mich., 1935*	*R.I., 1936*
Both sexes 15 and older	−8	−5	−3	−10	−8	−8	−5	−28
Males 15 and older[b]	+1	−28	+1	+2	+1	−42	+2	+6
15–24	−20	−13	−46	+5	−19	−20	−81	+14
25–44	+4	−58	+4	−22	+4	−88	+7	−61
45–64	+8	−18	+25	+16	+8	−27	+44	+44
65 and older	+19	+71	+40	+41	+18	+108	+70	+114
Females 15 and older[b]	−16	+16	−7	−20	−15	+24	−12	−56
15–24	−10	+58	−24	−17	−10	+88	−42	−47
25–44	−15	+2	−12	−9	−14	+3	−21	−25
45–64	−36	−8	+8	−25	−35	−12	+14	−69
65 and older	+17	+36	+34	−41	+16	+55	+60	−114

Source: Appendix F. Censuses of the United States: *1930, Unemployment,* Vol. I, pp. 455, 499, 837, 881, and *Population,* Vol. III, Part 1, pp. 1111, 1123, Vol. IV, pp. 797, 800, 802, 819, 1455; *1940, Population,* Vol. III, *The Labor Force,* Part 3, pp. 453, 588, Part 5, p. 14, Vol. IV, Part 3, pp. 191, 238–239, Part 4, p. 338. *1934 Report on the Census of Unemployment in Massachusetts,* Massachusetts Labor Bulletin No. 171, pp. 5–8. *Census of Employable Workers in Urban and Rural Non-Farm Areas, Pennsylvania, 1934,* State Emergency Relief Administration, Division of Research and Statistics, 1936, p. 1. *Michigan Census of Population and Unemployment,* First Series, No. 1, 1935, pp. 3, 4, 9. *Rhode Island Decennial Population Census of 1936: Story of the 680, 712,* Rhode Island Department of Labor, 1937, pp. 10, 23, 26.

[a] 14 and older.

[b] Standardized according to sex and age composition of the population of the United States in 1930.

Pennsylvania declined so much that the combined participation decreased. Participation of males 14 and older was slightly above the average in the other three states but by too slim a margin to be significant.

In view of the economic or industrial differences among these states, and of the fact that the censuses were conducted independently of each other, the general movements of participation among persons of the same sex and age are reasonably alike (Table 35). In three of the four states, the participation of young males under 25 was substantially below the average of 1930 and 1940, and the same may be said for females below 45, though not in the same three states. In two states men 25 to 44 were considerably below the 1930–40 average in their participation and in the other two slightly above it. For the most part,

the participation of men 45 and older tended to be much above the average of 1930 and 1940, but only because the 1940 participation was very low—indicating that the main exodus of older workers may have occurred after the worst years of the deep depression.

Official censuses were taken in three foreign countries during the severe depression of the 1930's.[9] Great Britain and Canada suffered widespread joblessness in 1931 (and in 1921) when the participation rates of both countries were lower than in years when unemployment was low or moderate, namely 1911, 1939, and 1951 (Table 36). As in the United States, the trend of participation was downward for males and upward for females between periods of high employment. In depression the participation rates of males were above the trend but those of females were below—enough so to more than offset the tendency of males and to pull the combined participation rate down below the trend. In Germany it was the opposite. Female participation in the depression year 1933 was above the average of 1925 and 1939 and male participation was below trend, with the latter low enough to pull the combined participation of both sexes down below the trend. Support of the theory that there is a net number of additional workers is thus found wanting in all three foreign countries.

Among the various age and sex groups, there was no great uniformity of behavior (Table 36). Some "inflow" occurred among males, especially older men and some "outflow" among females (as in the four states). In every age-sex group, one of the three nations invariably moved in a direction away from the other two in its labor force tendencies.

Labor Force Behavior Revealed by the Regular United States Census of 1940, a Year of Partial Recovery in a Severe Depression

No regular censuses of the deepest depression dates in the United States have ever been taken, but the unemployment reported in the census at the time of the partial recovery of April 1940 was several times that in the high-employment census of 1930 or that in the 1950 census (Table 37).

The case for the additional worker theory in the United States as a whole in 1940 is even weaker than the ones already cited. Participation was well below the average of 1930 and 1950, for both sexes combined, for males and females separately and for every age-sex group except women 25–44. The deficit in participation of both sexes combined was 13 per 1,000 population 14 and older and 19 per 100 unem-

[9] New Zealand conducted one in 1936 revealing an idleness of 7 per cent, which was too low to be called severe in this study.

TABLE 36

Number of Persons by Which the Labor Force Average of the Depression Census Dates Differed from the Average of the Preceding and Subsequent Moderately High-Employment Census Dates, in Relation to Population and Unemployment, by Sex and Age Group, 3 Foreign Countries

	Per 1,000 Population of Same Sex and Age			*Per 100 Unemployed Males 14 and Older*		
	Great Britain, 1911–1921, 1931–1951 [a]	*Canada, 1911–1921, 1931–1951* [a]	*Germany, 1925–1933, 1933–1950* [b]	*Great Britain, 1911–1921, 1931–1951* [a]	*Canada, 1911–1921, 1931–1951* [a]	*Germany, 1925–1933, 1933–1950* [b]
Both sexes 14 and older	−3	−4	−4	−3	−5	−3
Males 14 and older	+14	+13	−19	+14	+18	−13
14–24	+30	−19	+30	+30	−26	+20
25–44	−4	+5	+3	−4	+7	+2
45–64	−2	+9	−56	−2	+12	−37
65 and older	+90	+118	−70	+90	+162	−46
Females 14 and older	−19	−21	+13	−19	−29	+9
14–24	+17	−24	+10	+17	−33	+7
25–44	−28	−21	+30	−28	−29	+20
45–64	−51	−32	+1	−5	−44	+1
65 and older	+7	+11	−4	+7	+15	−3

Source: Appendixes A, C, and F.

[a] The depression labor force was the average of 1921 and 1931; the high-employment labor force was the average of 1911 and 1951.
[b] The depression labor force was for 1933; the high-employment labor force was the average of 1925 and 1950.

TABLE 37

Number of Persons by Which the Labor Force during the Severe Unemployment of April 1940 Differed from the Average of the Moderately High-Employment Census Dates April 1930 and 1950, in Relation to Population and Unemployment by Sex and Age Group, United States and Its Urban and Rural Areas

	Per 1,000 Population of Same Sex and Age			*Per 100 Unemployed Men 25–64*
	United States [a]	*Urban Areas* [b]	*Rural Areas* [b]	*United States* [a]
Both sexes 14 and older	−13	−9	−23	−19
Males 14 and older	−22	−18	−26	−32
14–24	−30	−35	−35	−43
25–44	−2	+3	−10	−3
45–64	−22	−24	−19	−32
65 and older	−85	−101	−68	−123
Females 14 and older	−7	+1	−19	−10
14–24	−5	−4	−11	−7
25–44	+14	+28	−11	+20
45–64	−35	−34	−39	−51
65 and older	−18	−18	−105	−26

Source: Appendixes A, C, F, and Supplementary Appendix H. Censuses of the *United States: 1930, Unemployment*, Vol. II, p. 250; *1940, Population*, Vol. IV, Part I, pp. 90–93; *1950, Preliminary Reports*, PC-7, No. 2, pp. 21–23.

[a] Labor force was standardized according to the rural-urban composition of population of the United States in 1940; totals were standardized for age or age-sex.
[b] Labor force was standardized for age or age-sex, according to the composition of population of the United States in 1940.

ployed men 25–64. And the younger and older males and older females showed very large deficits. Older men who lost their jobs apparently failed to seek new ones, for the deficit in their participation in 1940 below the average of 1930 and 1950 was enormous in relation to the excess in their unemployment above the average of 1930 and 1950.

Some students of labor force behavior have speculated that many urban workers tend to lose heart during a depression and return to the farms of parents or other relatives in order to find food and shelter or stopgap work. It has been proposed that this "return" (actually, most of it was a reduction in migration to cities) accounted for the lack of additional urban workers [10] and constituted disguised rural unemployment. However, if there was such a "return" it did not result in an increased participation in rural areas. The 1940 labor force par-

[10] Conference on Research in Income and Wealth, New York, November 1946, Verbal comments of W. S. Woytinsky.

TABLE 38

Number of Persons by Which the Labor Force of the Colored and Whites during the Severe Unemployment of April 1940 Differed from the Average of the Moderately High-Employment Census Dates April 1930 and 1950, in Relation to Population and Unemployment, by Sex and Age Group, United States

	Per 1,000 Population of Same Sex, Age, and Color		*Per 100 Unemployed Men 25–64*	
	White	*Colored*	*White*	*Colored*
Both sexes 14 and older	−18	−9	−28	−10
Males 14 and older [a]	−28	+2	−43	+2
14–24	−35	−21	−54	−23
25–44	−9	+14	−14	+16
45–64	−26	−23	−40	−26
65 and older	−88	−82	−135	−91
Females 14 and older [a]	−9	−23	−14	−26
14–24	−10	−9	−15	−10
25–44	+10	−24	+15	−27
45–64	−36	−53	−55	−59
65 and older	−17	−53	−26	−59

Source: Appendixes A, C, F, and Supplementary Appendix H. Censuses of the United States: *1930, Unemployment*, Vol. II, pp. 250–251; *1940, Population*, Vol. III, *The Labor Force*, Part 1, p. 90; *1950, Preliminary Reports*, PC-7, No. 2, p. 21.

[a] Standardized according to the age-sex composition of population of the United States in 1940.

ticipation was below the 1930 and 1950 average in both rural and urban areas, but it was relatively much more so in the former—perhaps because the depression had a greater impact on agriculture than on urban occupations, which benefited from the expansion of service industries. In the cities some inflow of females occurred, but it was overshadowed by the outflow of males. There was additional participation among men and women 25–44 in urban areas, but withdrawals were manifest in every rural group, without exception.

Among whites the 1940 participation was lower than the average of 1930 and 1950 in every age-sex category except women 25–44 (Table 38). For colored females it was depressed more than for white females. But the deficiency in the 1940 participation of the colored of both sexes combined, with respect to the 1930 and 1950 average, was only half that of whites although participation fell enormously between 1930 and 1940. The reason was that participation of Negroes decreased also from 1940 to 1950 thus lowering the average participation for 1930 and 1950, so that when compared with this lowered average, it yielded a smaller deficit (or in the case of males even an excess), compared to

the whites. With respect to unemployment, the deficiency in the 1940 participation of the colored was also much below that of the whites.

There is further evidence in the forty-eight states examined separately, that the deficiency in participation for 1940, compared to the average for 1930 and 1950, was not an accident of statistical aggregation. Every state manifested a deficit for males and for both sexes combined; and only seven scattered states showed additions—all small or negligible—for females. The deficit for both sexes ranged from 3 per 1,000 population 14 and older, or 9 per 100 unemployed in Delaware, to 49 per 1,000 population 14 and older, or 152 per 100 unemployed in Nevada (Table 39). There is no information by states on the rural and urban labor force in 1930, but in only eighteen states was urban participation higher in 1940 than in 1950 and in only thirteen was rural participation higher. The median deficit for the forty-eight states was 24 males per 1,000 male population and approximately 15 females per 1,000 female population, or 42 males and 88 females, respectively, per 100 unemployed. For both sexes combined the median deficit of 1940 participation below the average of 1930 and 1950 was 19 per 1,000 population and about 43 per 100 unemployed.

UNITED STATES CITIES, 1930, 1940, AND 1950.

The materials permit further study of the same 38 large cities used in intercity correlations in Chapter 4. Comparison was made within each city between the labor force groups 14–19, men 65 and older, and wives (all these groups being generally in a dependent status) and changes in the unemployment of men 25–44, the primary earning group.

The investigation indicated that among males, only for men 65 and older was there a significant correlation (and very slight, at that) between labor force participation and unemployment of males 25–44 for both 1930–1940 and 1940–1950. And only wives 35–44 in 1940–1950 had a correlation on the 95 per cent level (with unemployed men 25–44). Most of the labor force groups bore no significant correlation on any level with unemployment, although the fact that all the correlations were positive cannot be entirely ignored as a consideration supporting the additional worker theory.

It would also be interesting to compare changes in participation of these groups with changes in their own employment or unemployment. Unfortunately, such comparisons would present difficulties. An attempt to correlate with *unemployment* would be fruitless if the labor force fell in the same degree as employment, for unemployment could not change if people were abandoning the labor force as fast as they lost their jobs. And the correlation with *employment* is apt to be high simply because employment is so large a part of the labor force. Moreover, a high correlation would not necessarily mean that job conditions

TABLE 39

Number of Persons by Which the Labor Force 14 and Older during the Severe Unemployment of April 1940 Differed from the Average of the Moderately High-Employment Census Dates April 1930 and 1950, in Relation to Population and Unemployment, by Sex, the 48 States, Their Urban and Rural Areas, and 38 Large Cities

	Per 1,000 Population of Same Sex and Age				*Per 100 Unemployed of Same Sex*	
	States	*Urban Areas* [a]	*Rural Areas* [a]	*Large Cities*	*States*	*Large Cities*
Both sexes						
Number of places with additions	0	18	13	6	0	6
Number of places with deficits	48	30	35	32	48	32
Least deficit (or greatest addition)	−3	+26	+38	+14	−9	+43
Greatest deficit	−49	−58	−46	−46	−152	−219
Median deficit	−19	−9.5	−14	−15	−42.5	−35
Interquartile range	−15.5	−29.5	−28.5	−19	−33	−46
Males						
Number of places with additions	0			3	0	2
Number of places with deficits	48			35	48	36
Least deficit (or greatest addition)	−4			+13	−2	+289
Greatest deficit	−53			−51	−95	−208
Median deficit	−24			−23	−42	−47
Interquartile range	−12.5			−15	−30	−64
Females						
Number of places with additions	7			11	6	11
Number of places with deficits	41			27	42	27
Least deficit (or greatest addition)	+11			+30	+108	+181
Greatest deficit	−56			−32	−1867	−229
Median deficit	−14.5			−5.5	−88	−15
Interquartile range	−20			−23	−131.5	−81

Source: *Census of Unemployment, 1930*, Vol. I, Table XII–8, pp. 18–22. *Census of Population: 1930*, Vol. IV, pp. 66–67, 83; *1940*, Vol. III, *The Labor Force*, Parts 2–5; *1950*, Vol. II, *Characteristics of the Population*, Part 1.

[a] Data on rural and urban areas were lacking for 1930. Deficits here were computed as the difference between 1940 and 1950. Since the trend is upward for females and downward for males, such deficits would be meaningless and are, accordingly, computed only for both sexes combined.

were influencing participation, i.e. youths and older men have evinced a long-run tendency to leave the labor force, and it is to be expected that this outward drift would have a depressing effect on their employment.

THE PROPORTION OF WIVES IN THE LABOR FORCE BY EMPLOYMENT STATUS OF HUSBANDS.

This chapter has so far been confined to relationships over time. Comparisons are now made between wives with jobless husbands and

wives with employed husbands in 1940. All wives of all classes, unstandardized, had virtually the same participation whether their husbands were employed or unemployed (Table 40). However, standardized for age, color, child status, and the size of the community in which they resided, wives of unemployed men had higher participation and showed varying tendencies with the age, color, child status, or residence of the wife. At 35 or over, the wife of an unemployed husband seemed somewhat more likely to be in the labor force than the wife of an employed husband, and less likely under that age. White wives of unemployed men were more likely to be in the labor force in greater proportion if they had no children; those with children manifested little reaction to their husband's unemployment. In communities of every size—both urban and rural—nonwhite wives, standardized for age, had a *lower* labor force tendency if their husbands were unemployed—whether or not they had young children. One explanation for this paradox may be that many colored fared better on relief in 1940 than if their breadwinners were employed, and it is supported by the fact that the disparity was somewhat larger in cities and rural nonfarm areas than in rural farm areas—where relief payments may not have been so ample.[11] Among *white* wives, the effect of residence varies. Wives who had unemployed husbands showed greater participation than wives of the employed if they lived in the metropolitan districts, a mixed tendency if they lived in a smaller city, and *less* participation if they lived in small urban places or rural areas (Table 40). The reason for this mixed behavior for white wives may well have been that, for them, the controlling factor was opportunity. Obviously in a large city the wife could seek work in many occupations other than the one in which her husband had been employed. In a rural nonfarm area, her search would often be confined to one or two firms, and the same forces causing her husband's disemployment could discourage her from even looking for a job.

Materials in the same detail in the 1950 census have not yet become available. But summary estimates of the *Current Population Reports* suggest that the patterns were not very different from those in 1940 (Table 41), although the similarity must be discounted by the fact that the data at hand for 1950 are unstandardized for age or, by color, for residence. As in 1940, white wives of the unemployed had a much higher participation than those of employed husbands; and in 1950 colored wives had a noticeably lower participation if their husbands were unemployed than if their husbands were employed.

[11] Married women with husbands not in the labor force, however, were themselves in the labor force to a much greater degree than the wives of either employed or unemployed men. This difference might have significance only if a substantial number of husbands were to drop out of the labor force.

TABLE 40

Number of Wives in the Labor Force per 1,000 Wives of the Same Husband-Employment Status, Child Status, and Residence, United States, April 1940

	Wives with and without Children under 10, Combined [a]				*Wives with Children under 10* [c]		*Wives without Children under 10* [c]	
	Unstandardized		*Standardized* [b]					
	Husband:		*Husband:*		*Husband:*		*Husband:*	
	Empl.	*Unempl.*	*Empl.*	*Unempl.*	*Empl.*	*Unempl.*	*Empl.*	*Unempl.*
				WHITE AND NONWHITE COMBINED				
United States	137	136	150	204	73	74	203	208
Met. districts of 100,000 or more	162	173	177	195	72	86	241	271
Urban areas:								
25,000–100,000	192	192	203	199	106	122	265	276
2,500–25,000	180	168	193	181	105	108	247	254
Rural areas:								
Nonfarm	133	83	148	105	81	56	191	144
Farm	54	39	59	55	42	27	85	71
				WHITE				
United States	125	118	139	200	62	63	190	292
Met. districts of 100,000 or more	150	158	164	190	66	79	230	263
Urban areas:								
25,000–100,000	171	157	183	184	95	105	241	236
2,500–25,000	161	134	172	162	91	85	227	213
Rural areas								
Nonfarm	123	71	138	94	73	44	182	126
Farm	38	32	50	47	24	21	67	65
				NONWHITE				
United States	267	273	274	245	213	162	314	300
Met. districts of 100,000 or more	344	265	319	251	212	138	389	326
Urban areas:								
Nonfarm	455	383	427	370	312	266	504	440
Farm	429	396	419	393	346	328	468	436
Rural areas:								
Nonfarm	250	211	260	221	192	134	304	280
Farm	150	138	153	138	134	119	167	152

Source: *Census of Population, 1940, The Labor Force* (Sample Statistics), *Employment and Family Characteristics of Women*, pp. 164–175.

[a] Having husband present, i.e. reported as a member of the family though temporarily absent (on business trip, vacationing, or visiting) at time of enumeration.

[b] Standardized for age and child status; in the top section, also for color; in the case of the United States, also for residence.

[c] Standardized for age and, in the case of the United States, for residence.

TABLE 41

Number of Wives in the Labor Force per 1,000 Wives of the Same Husband-Employment Status and Residence, United States, March 1950

	Husband Employed	*Husband Unemployed*
	WHITE AND NONWHITE COMBINED [a, b]	
United States	240	312
Urban areas	258	374
Rural areas		
Nonfarm	228	286
Farm	178	88
	WHITE	
United States	228	333
Urban areas	...	...
Rural areas		
Nonfarm	...	...
Farm	...	...
	NONWHITE	
United States	376	346
Urban areas	...	...
Rural areas		
Nonfarm	...	...
Farm	...	...

Source: *Current Population Reports, The Labor Force,* Bureau of the Census, P-50, No. 29, March 1950, pp. 8–9.

[a] Having husband present, i.e., reported as a member of the household though temporarily absent (on business trip, vacationing, or visiting) at time of enumeration.

[b] Standardized for residence in case of the United States. It was not possible to standardize for age.

The factor of relief could not well explain a second paradox: The participation of Negro wives with unemployed husbands was lower in 1950 (as in 1940) than that of Negro wives with employed husbands. By 1950 earnings had risen everywhere well above the public-assistance allowances. Nor does the answer lie in the fact that colored females reduced their participation between 1940 and 1950 while white females greatly expanded theirs, so that there is a long-run trend toward diverse behavior. It is possible that the difference might disappear if data were available to allow classification of colored women in 1950 by age residence, and child status.

On the whole, there is little or no support for the theory that unemployment drives net additions of workers into the labor force. Heneman made a further test of the theory, using case studies covering 1 per cent of the households in St. Paul, Minnesota, which were interviewed

by the University of Minnesota Employment Stabilization Research Institute each month from October 1941 through June 1942. The test could find no secondary unemployment. Heneman concluded that Woytinsky's methods, as far as that period of St. Paul experience was concerned, "were inappropriate and highly inaccurate." [12]

It would, of course, be too much to expect no instances of wives or children being driven into the labor force because the head of the household was unemployed. In households with severely curtailed means, some women might lay aside their aprons and some children their school books to seek jobs that would help meet the payments on the family house or car. But even during a depression there are still many more heads of households employed than unemployed, and many young girls or elderly men might discover that any pay they could earn would barely cover the extra expenses of working or that it would be too meager a reward for their efforts. Such persons might withdraw from the labor force; more so, if the young had access to free education or the elderly to old-age pensions.

There is, of course, considerable traffic into and out of the labor force at all times; statistics on gross movement gathered by the Current Population Surveys for 1948–1952 show that a 4 to 5 per cent withdrawal is replaced by a similar proportion each month—about 2½ per cent of which are males and 10 per cent females. This gross movement remained very much the same during the five years, notwithstanding the recession of 1949–1950. Thus a period of mild recession does not seem to give rise to either net or gross movement in the proportion of population in the labor force (Chapter 11).[13]

Some Questions concerning the Findings of This Investigation

During the years since these findings were reported in preliminary form [14] several scholars have cast doubt on the materials on which the findings rest, or on the conclusions they support.

[12] Herbert Heneman, "Measurement of Secondary Unemployment: An Evaluation of Woytinsky's Methods," *Industrial and Labor Relations Review,* July 1950, p. 567.

[13] For further analysis of gross movement, see the section on *Labor Force Turnover* in Chapter XI. Neither this stability, however, nor the net outflow in depressions revealed in this chapter, precludes the possibility of a rise in gross movement in a time of *severe* unemployment.

[14] "Size of the Labor Force under Changing Income and Employment," mimeographed paper presented to the Conference on Research in Income and Wealth, National Bureau of Economic Research, 1946; "The Labor Force and Economic Change," *Insights into Labor Issues,* edited by R. A. Lester and Joseph Shister, Macmillan, 1948, Chap. 13; "Labor Force, Income and Employment," mimeographed, National Bureau of Economic Research, 1950; "Impact of Effective Demand on the Labor Supply," *The American Economic Review,* May 1953, pp. 458–467; discussion by Theodore Leavitt and the author's reply, same journal, September 1954, pp. 637–647.

ARE THE CENSUSES TAKEN DURING DEPRESSIONS AND THOSE TAKEN DURING PROSPERITY COMPARABLE?

Durand and Ducoff have objected to the conceptual comparability of the four state censuses and of the 1940 census of the United States with the high employment enumeration of April 1930.[15] The sole objection to these state censuses is that the questions on labor force which they used differed somewhat from those used by the United States census. None of the critics, however, has made clear just how the questions could have led to an understatement of labor force sufficient in all four cases to convert the additions to, into subtractions from the labor force.

It will be rejoined that the study has been similarly remiss in dismissing the 1937 enumerative check census and its apparent additions after merely pointing out that such a special survey could easily be in error by the amount of the so-called additional workers. It should be kept in mind that, although no single state census need be regarded as more accurate than the enumerative check, there were four such censuses; they were conducted at different dates in the years of almost greatest depression; and notwithstanding their independence of each other, they showed similar results. Also, they did not differ much from the results of the foreign censuses. For separate surveys to yield the same general quantitative error in the same wrong direction would, indeed, be a coincidence. Moreover, this chapter, Chapter 3, Appendix F, and Supplementary Appendixes G and H show that actually the United States materials have been fairly comparable over the years, and that the three nations conducting censuses during severe unemployment—Great Britain and Canada in 1921 and 1931, and Germany in 1933—used the same concept and measurement technique as for the previous and succeeding high-employment years. It may be argued, of course, that the foreign countries do not furnish much information on technique and concept, so that there still remains the possibility of incomparabilities. But until indication has been provided that there are such incomparabilities, the data constitute serious evidence against the existence of net numbers of additional workers in severe or deep depression.

Finally, in the United States, the technique instituted in the 1940 census was continued with minor alterations into the 1950 census. Yet the 1940 participation was below the 1950 and 1930 levels by about the same amounts. True, an impressive discrepancy was discovered in

[15] Unpublished letters from John Durand and Louis Ducoff commenting on the author's "Size of the Labor Force under Changing Income and Employment." (See preceding footnote.)

April 1950 between the decennial census and the sample survey report (Appendix F), the latter seeming to show a recovery in participation between 1940 and 1950 greater than that shown by the former, and suggesting that a still greater labor force exodus occurred under the depression conditions than the census results show.

Durand has further objected that additional workers could have entered and left during the 1930's, before the 1940 census was enumerated, and that until a sufficient peacetime experience has been recorded by the *Current Population Reports*, the possibility remains that there are temporary additional workers during recession. However, records are now available covering ten years of such experience, including two mild recessions—one in late 1949 when joblessness rose to 7 per cent, and the other in 1954 when it rose to nearly 6 per cent. Yet the analysis of these records (Chapter 11) does not disclose a trace of corroboration for the hypothesis that there is a net number of additional workers in recessions.

ARE THERE ADDITIONAL WORKERS IN BOTH DEEP DEPRESSION AND HIGH PROSPERITY?

Woytinsky has suggested in a recent book and elsewhere that there may be additions in periods of both abnormally low, and abnormally high employment, with withdrawals in periods of balanced prosperity.[16] He argues that labor force additions appeared during the mid 1930's (at the time of the four state censuses), vanished by the time of the "balanced prosperity" of April 1940, and then reappeared during the subsequent war and postwar high employment. This thesis merits examination.

The 1940 census gave powerful evidence that the labor force was depressed rather than enlarged by the conditions then prevailing. Woytinsky has described these conditions as those of "balanced prosperity," thus presumably distinguishing them from the great depression conditions of 1934–1936 and 1937; and yet the April 1940 census enumerated 8 million persons who were either seeking jobs or on the public emergency work relief rolls. These 8 million persons were 15 per cent of the labor force,[17] or more than twice the highest percentage of unemployment that has ever been officially recorded by any other United States census. Was unemployment in 1934–1936 or 1937 so high above that of April 1940 as to raise a difference in degree to a differ-

[16] Discussion, at a session of the American Economic Association, of the author's paper, "Impact of Effective Demand on the Labor Supply," *American Economic Review*, May 1953, pp. 458–467; Woytinsky and Associates, *op. cit.* See also J. R. Hicks and A. G. Hart, *The Social Framework of the American Economy*, Oxford University Press, 1945, p. 79.

[17] Not counting several million other full-time equivalent unemployed, concealed among persons working part time or on layoff.

ence in kind? The National Industrial Conference Board estimates of unemployment for 1934–1936 were arrived at by interpolating between the 1930 and 1940 censuses—in order to estimate the working-age population and the labor force—and then subtracting estimates of employment which were secured by interpolating with various employment indexes for major industry groups.[18] These N.I.C.B. estimates, the four state censuses, and *The Enumerative Check Census* suggest that unemployment ranged from a fifth to half again higher in the great depression than in April 1940.[19] The argument that there were additional workers in 1937 but not in 1940 assumes that a decline of unemployment from 20 per cent to 15 per cent of labor force was powerful enough to drive out the additional workers by 1940. Is there a theory as to why there should be a critical rate between 20 and 15 per cent unemployment, at which additions to the labor force are converted suddenly into deficiencies? Surely without one we may presume that the greater the depression the greater labor force deficiency. In any case few instances of unemployment levels above those in April 1940 have been recorded either in the United States or in other countries. Unemployment was 12 per cent of the labor force in Great Britain in the censuses of 1921 and 1931, 15.7 per cent in Canada in the census of 1931, and 18 per cent in Germany in the census of 1933.[20] For depressions with up to 18 per cent unemployment it would seem possible to conclude that the statistics have shown no dependable evidence of additional workers.

HAS THE DIFFICULTY IN FINDING JOBS KEPT WORKERS OUT OF THE LABOR FORCE?

It is conceivable that there are additional workers who escape definition and measurement. A thoughtful reader has expressed these objections:

[18] See the discussion of these estimates by Russell A. Nixon and Paul A. Samuelson in "Estimates of Unemployment in the United States," *Review of Economic Statistics*, February 1940.

[19] Unemployment percentages for 1934–1936 in the United States are annual averages; they could not be found for actual seasons because of the lack of any index of seasonal variation of the labor force in these years. The ratio is computed, using the highest of the unemployment figures during 1934–1937. As observed earlier, the state censuses were taken in Massachusetts and Pennsylvania in early 1934, in Michigan in early 1935, and in Rhode Island in early 1936. *The Economic Almanac 1951–1952*, National Industrial Conference Board, p. 100; *Census of Partial Employment, Unemployment, and Occupations*, 1937, Vol. IV, *The Enumerative Check Census, passim.*

[20] Had the labor force participation varied widely in relation to population, it would have been better to express all unemployment as percentages of working-age population, but the comparative stability of the labor force rates made this step unnecessary.

"I wonder whether the census-taker's concept of labor force can be taken at face value? A man who has been out of work for two years, who had searched far and wide for a position, may feel so discouraged about prospects that he does not spend the fifty cents or dollar needed for moving around; he is not absolutely looking for a job in the census sense, but provided he is not demoralized, is it a sound view that he is no part of the labor force?"

The conception of labor force and unemployment is discussed in Appendix I. Certainly, the problem has complicated psychological aspects, and there is no doubt an almost infinite gradation of reactions of workers to unemployment or the threat of it. Nevertheless, we may mark off two main classifications of unemployed workers. The first is made up of those for families whose breadwinners have jobs. This is surely the largest, for even in the greatest depression the number of employed at least triples the number of unemployed. In this group, if job-seeking becomes hopeless or wages and working conditions unfavorable, some elderly men may, without sharp regret, retire, some young girls may take extended vacations or devote full time to the competition for the reduced number of financially eligible young males, and some youths may postpone leaving school. Such persons could not be regarded as unemployed—even psychologically. The others are persons who might be genuinely willing and able to work and therefore psychologically in the labor force, but not so classified statistically because they find job-hunting futile or too expensive. It is possible to conjure up hypothetical cases: the son who has had to interrupt his education and look for work because of his father's unemployment, but who finally gives up even looking; or the bookkeeper of 58 who cannot compete with young girls who are trained in the use of business machines and whose salary demands are lower.

However, even these people need not be overlooked, for the United States census rules since 1940 have required that enumerators be instructed to report as unemployed not only those persons who were actually seeking work but also those who would have been except for the fact that there was no work to be had, or no work to be had in their occupations.[21] And a similar provision has been included since 1940 in all the enumerations of labor force, beginning with the WPA monthly reports and continuing with the census monthly reports and 1950 decennial enumeration.[22] This provision would seem to go as far as house-

[21] *Census of Population, 1940,* Vol. III, Part 1, *United States Summary,* pp. 290–297, 512.

[22] *Monthly Report on Unemployment* of the Works Progress Administration, Schedule DRS 370C. *Current Population Reports* of the Bureau of the Census, Schedule SS-570cS14, Form P-1605bS21, August 1949; *Census of Population, 1950,* Vol. II, Part 1, pp. 460–461, 471–472. The 1950 census instructions to enumerators

to-house enumeration could in ensuring that such additional workers would not be overlooked.

WHAT HAPPENS DURING A DEPRESSION TO THE RELATION BETWEEN LABOR FORCE PARTICIPATION AND UNEMPLOYMENT, IF ACCOUNT IS TAKEN OF INCOME CHANGES OCCURRING AT THE SAME TIME?

This chapter has concluded that a rising tide of unemployment during a severe depression causes more people to leave than to enter the labor force, with the result that participation shows a net decline. But what happened to incomes during the depression studied? The investigation has not been able to detect any systematic impact of income in peacetime periods of high employment, but it may be that workers become accustomed to rising income and react only when it ceases to rise or when it declines. A comparison of the depression levels of income and labor force with the levels solely of the previous census date would have been obscured by the long-term upward trends in income and in female participation, and long-term downward trends in male participation. The depression levels of income and labor force are therefore compared with the trend levels—those that would have existed had the average rate of increase between the preceding and the subsequent high-employment census dates been maintained throughout the intervening period.

So measured, real income per worker was depressed in each of the four countries (see Table 42), whether expressed per labor force member or per employed worker.[23]

Under depressed income per worker, what was the behavior of labor force participation in relation to the unemployment of males? The participation of males showed a mixed relation to the change in their un-

stipulate (Par. 148): "you should also report a person looking for work if last week he was waiting to hear the results of attempts made within the last 60 days to find a job." They list as examples of "looking for work":

"(a) Registration at a public or private employment office.
(b) Being on call at a personnel office, at a union hiring hall, or from a nurse's register or other similar professional register.
(c) Meeting with or telephoning prospective employers.
(d) Placing or answering advertisements.
(e) Writing letters of application.
(f) Working without pay in order to get experience or training."

And paragraph 149 states: "Enter 'yes' for a person who would have been looking for work except for one of the following factors:

"(a) He was on indefinite layoff. That is, he was laid off from his job and was not instructed to return to work within 30 days of the date of layoff.
(b) He was temporarily ill or temporarily disabled.
(c) He believed no work was available in the community or in his line of work."

[23] The deviations were less when expressed per employed worker, but they were nevertheless observable for every country, except that one may be seen for Germany only if 1939 was used as the terminal high-employment date (instead of 1950).

TABLE 42

Depression Deviations in Labor Force Participation per 100 Unemployed Males, Associated with Percentage Depression Deviations in Real Disposable Personal Income per Worker, United States and 3 Foreign Countries

(Depression census dates, compared with the trend between the preceding and the subsequent peacetime, moderately high-employment census dates)

	United States	*Great Britain*		*Canada*	*Germany*	
	1940 compared with trend between 1930 and 1950	*1921 and 1931 compared with trend between 1911 and 1951* (1921)	(1931)	*1931 compared with trend between 1921 and 1951*	*1933 compared with trend between: 1925 and 1939*	*1925 and 1950*
Deviations in Labor Force Participation [a] per 100 Deviation in Male Unemployed [b]						
Both sexes	−22	−5	−1	+2	−11	−6
Males	−30	+8	+8	+10	−14	−17
Females	−15	−18	−9	−6	−9	+6
Deviations in Income per Worker [c] in Equivalents of United States Dollars of 1929 Buying Power						
Per employed worker	−2.5	−12.9	−12.1	−11.8	−7.4	+6.5
Per labor force member	−10.1	−20.7	−22.6	−21.8	−25.3	−9.8

Source: Appendixes A, C, and D.

[a] Standardized for sex and age composition on the basis of the composition of population of the United States in 1940.
[b] Males 14 and older.
[c] Adult-male equivalent employed.

employment, deviating below trend in the United States and Germany, and above trend in Great Britain and Canada. That of females declined in all four countries.[24] And that of both sexes combined declined in all countries except Canada.[25] But the amounts of labor force participation deviations bore no really systematic relation to the amounts of deviations in income. It is true that the United States, with the smallest depression in income, had the largest depression in participation relative to unemployment, and that Great Britain, with the largest income deviations, had below average deviations in participation relative to unemployment. But in Canada and Germany it was impossible to detect any systematic tendency for the relationship between labor force participation and unemployment to have been affected by the behavior of income during the depression period.

[24] Unless 1950 is used as the terminal date for Germany instead of 1939.
[25] The rise was very slight for Canada and must be discounted, because the lack of income data for 1911 made it necessary to use 1921 as the so-called previous high-employment date, despite the fact that it was actually a year of considerable unemployment.